

Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P802749/WO/1	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/EP2004/008141	International filing date (day/month/year) 21.07.2004	Priority date (day/month/year) 26.07.2003
International Patent Classification (IPC) or national classification and IPC H02H11/00, H02J7/00		
Applicant DAIMLERCHRYSLER AG		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

a. ☒ (sent to the applicant and to the International Bureau) a total of 10 sheets, as follows:

☒ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

b. ☐ (sent to the International Bureau only) a total of _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

<input checked="" type="checkbox"/>	Box No. I	Basis of the report
<input type="checkbox"/>	Box No. II	Priority
<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/>	Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2), with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/>	Box No. VI	Certain documents cited
<input type="checkbox"/>	Box No. VII	Certain defects in the international application
<input type="checkbox"/>	Box No. VIII	Certain observations on the international application

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

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International application No.

PCT/EP2004/008141

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This report is based on translations from the original language into the following language _____ which is the language of a translation furnished for the purposes of:

- ☐ international search (Rule 12.3 and 23.1(b))
☐ publication of the international application (Rule 12.4)
☐ international preliminary examination (Rule 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

☐ the international application as originally filed/furnished

☒ the description:

pages 2, 3, 6-15 as originally filed/furnished

pages* 1, 4, 4a, 5, 5a received by this Authority on /filed with the demand

pages* _____ received by this Authority on _____

☒ the claims:

nos. _____ as originally filed/furnished

nos.* _____ as amended (together with any statement) under Article 19

nos.* 1-11 received by this Authority on /filed with the demand

nos.* _____ received by this Authority on _____

☒ the drawings:

sheets 1/2-2/2 as originally filed/furnished

sheets* _____ received by this Authority on _____

sheets* _____ received by this Authority on _____

☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☒ The amendments have resulted in the cancellation of:

☐ the description, pages _____

☒ the claims, nos. 12

☐ the drawings, sheets/figs _____

☐ the sequence listing (*specify*): _____

☐ any table(s) related to sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages _____

☐ the claims, nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing (*specify*): _____

☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-11	YES
	Claims		NO
Inventive step (IS)	Claims	1-11	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-11	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

1. The present report refers to the following documents:

D1: DE 199 22 332 C (DAIMLER CHRYSLER AG) 9
November 2000

D2: DE 199 51 095 A (DAIMLER CHRYSLER AG) 13 June
2001.

2 NOVELTY

- 2.1 Document D1 is considered the prior art closest to the subject matter of claim 1. It discloses (the references between parentheses relate to D1):

an arrangement (11) for protecting an electrical device (14),

- having a pole terminal (20) which is connected to a pole of a battery (10) and
- a ground-contact unit (figure 3), which has a connection section (21a, 21d) electrically connected directly to the pole terminal (20) and a starting-aid contact section (21b), wherein the connection section and the

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starting-aid contact section are electrically connected in series by means of an inserted closed switch (23), and

- an evaluation circuit (17) which opens a switch (16) as soon as it detects a fault current (column 7, lines 67-68).

2.2 The subject matter of claim 1 therefore differs from the known arrangement in that

a main line is provided which independently of the position of the switch is electrically connected to the starting-aid contact section and leads to at least one second electrical device, and in that the first device is electrically connected to the pole terminal independently of the position of the switch and in such a way that it bypasses the main line.

2.3 The subject matter of claim 1 is therefore novel (PCT Article 33(2)).

3 INVENTIVE STEP

3.1 The problem to be solved by the present invention is therefore understood to be that of providing a protection arrangement according to the prior art which is suitable for different operating states, such as generator mode, start mode or failure.

3.2 The solution proposed in claim 1 of the present application involves an inventive step (PCT

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Article 33(3)) since the prior art offers nothing to suggest this solution.

In document D2 a starting-aid contact section is provided. However, it is arranged in such a way that the connection of the main line to the pole terminal always depends on the position of the switch. Consequently, document D2 cannot contribute anything to the subject matter of claim 1.

4 DEPENDENT CLAIMS

Claims 2-11 are dependent on claim 1 and therefore likewise meet the PCT requirements for novelty and inventive step.

5 INDUSTRIAL APPLICABILITY

The circuit arrangement according to the present application is used for electrical systems in motor vehicles. Consequently, the industrial applicability requirements of PCT Article 33(4) are satisfied.